

# **CALFED Science Program Workshops**

## **Science Issues Relating to Delta Conveyance Infrastructure**

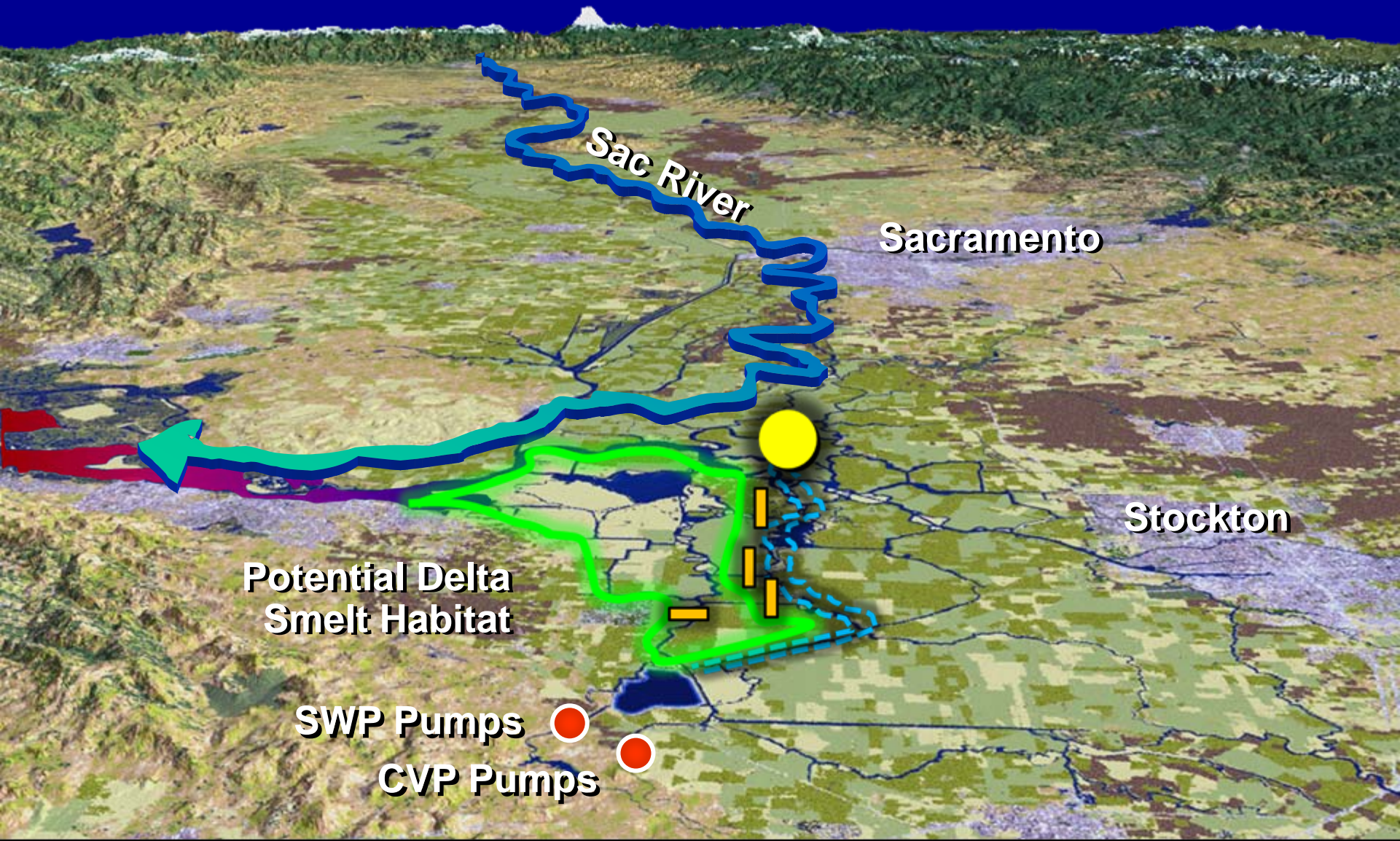
# **Design and Operation Issues**

**Dennis Majors**

**Metropolitan Water District of Southern California**

**August 22, 2007**

# Eco-crescent / Middle River Conveyance





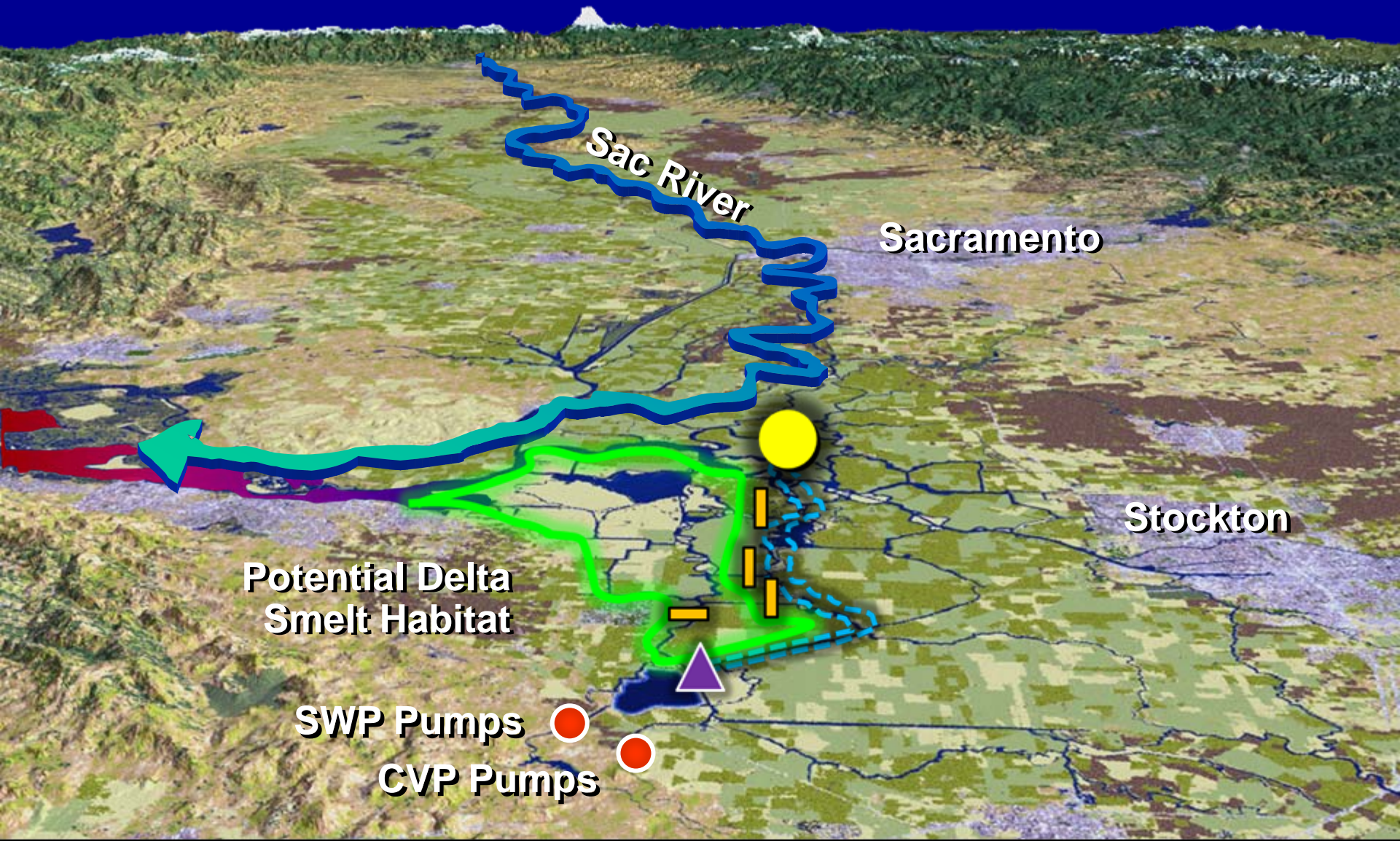
# Eco-crescent / Middle River Conveyance



SWP Pumps ●  
CVP Pumps ●

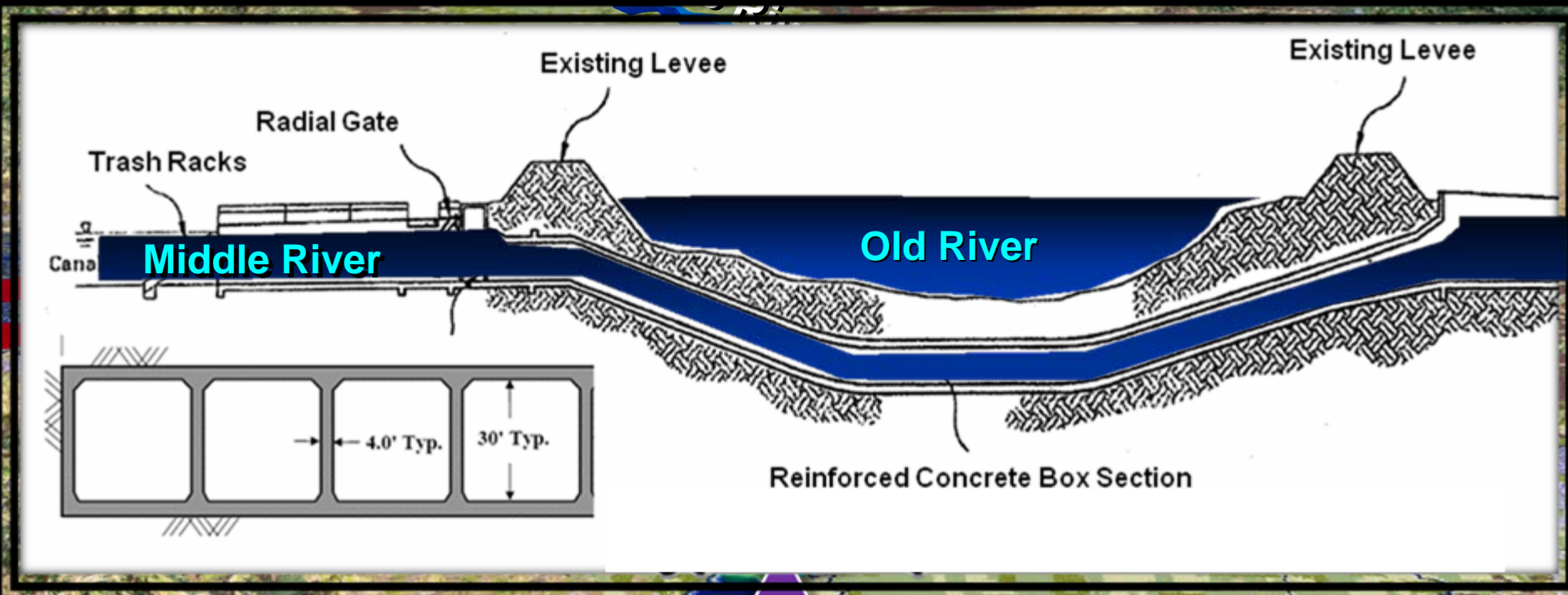


# Eco-crescent / Middle River Conveyance





# Eco-crescent / Middle River Conveyance

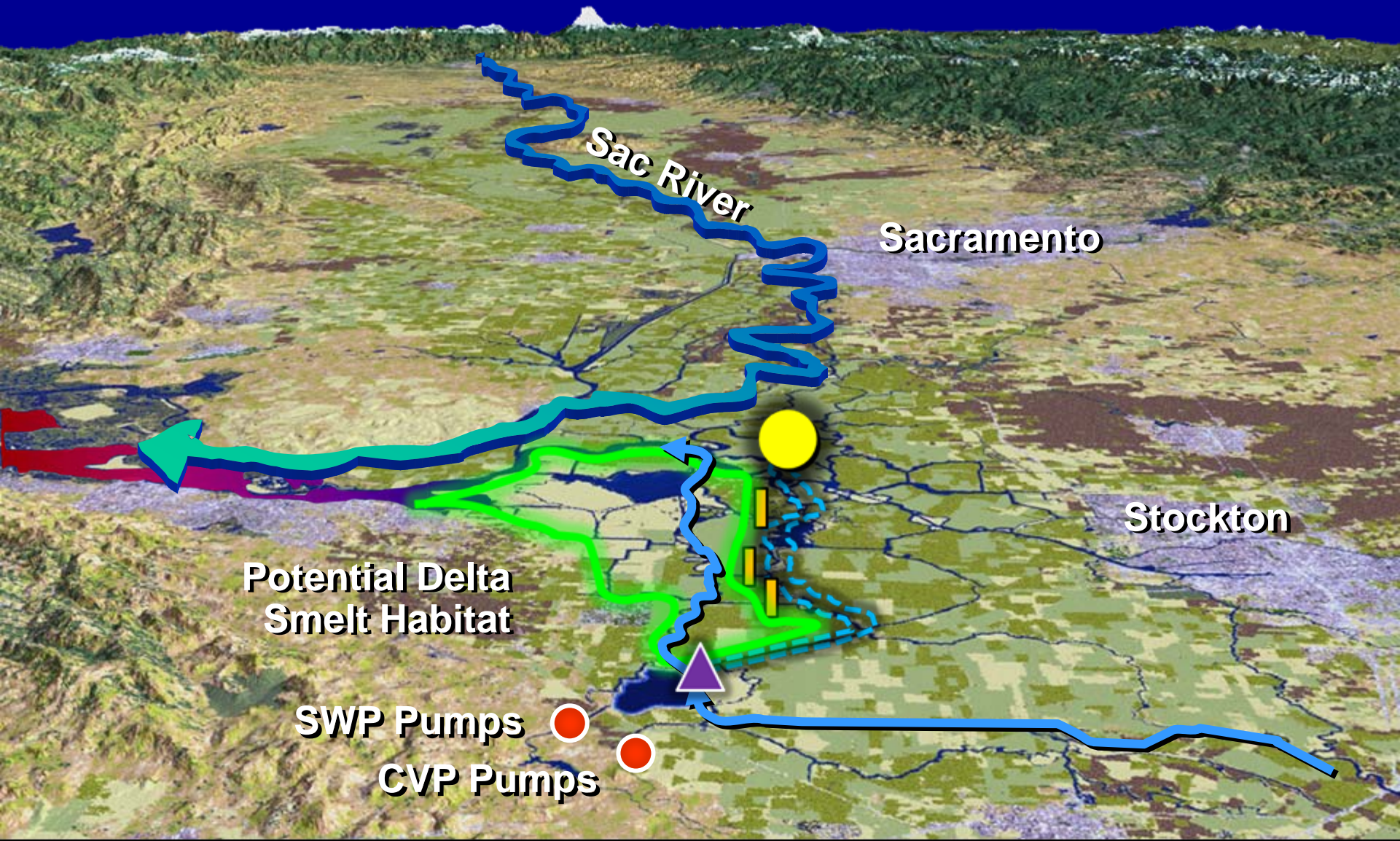


SWP Pumps

CVP Pumps

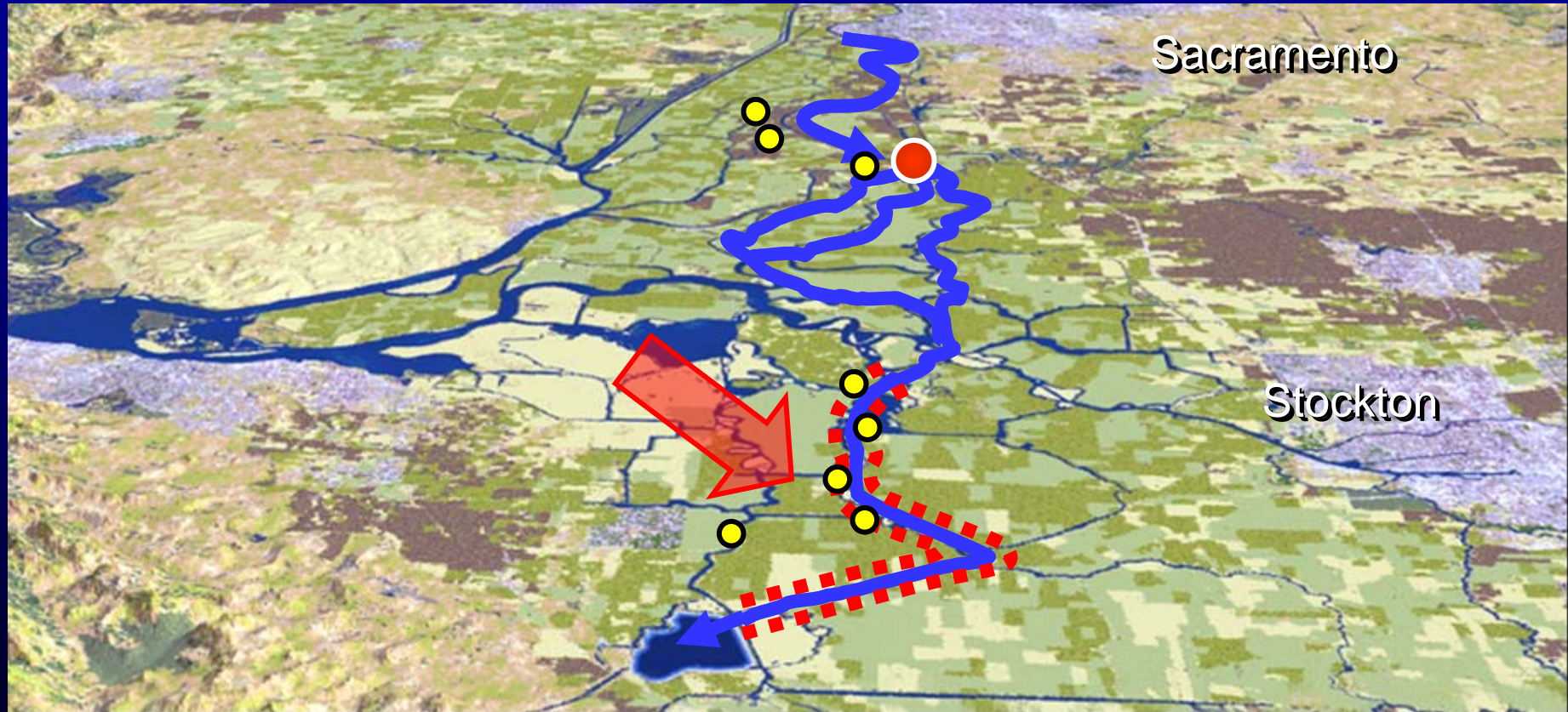


# Eco-crescent / Middle River Conveyance



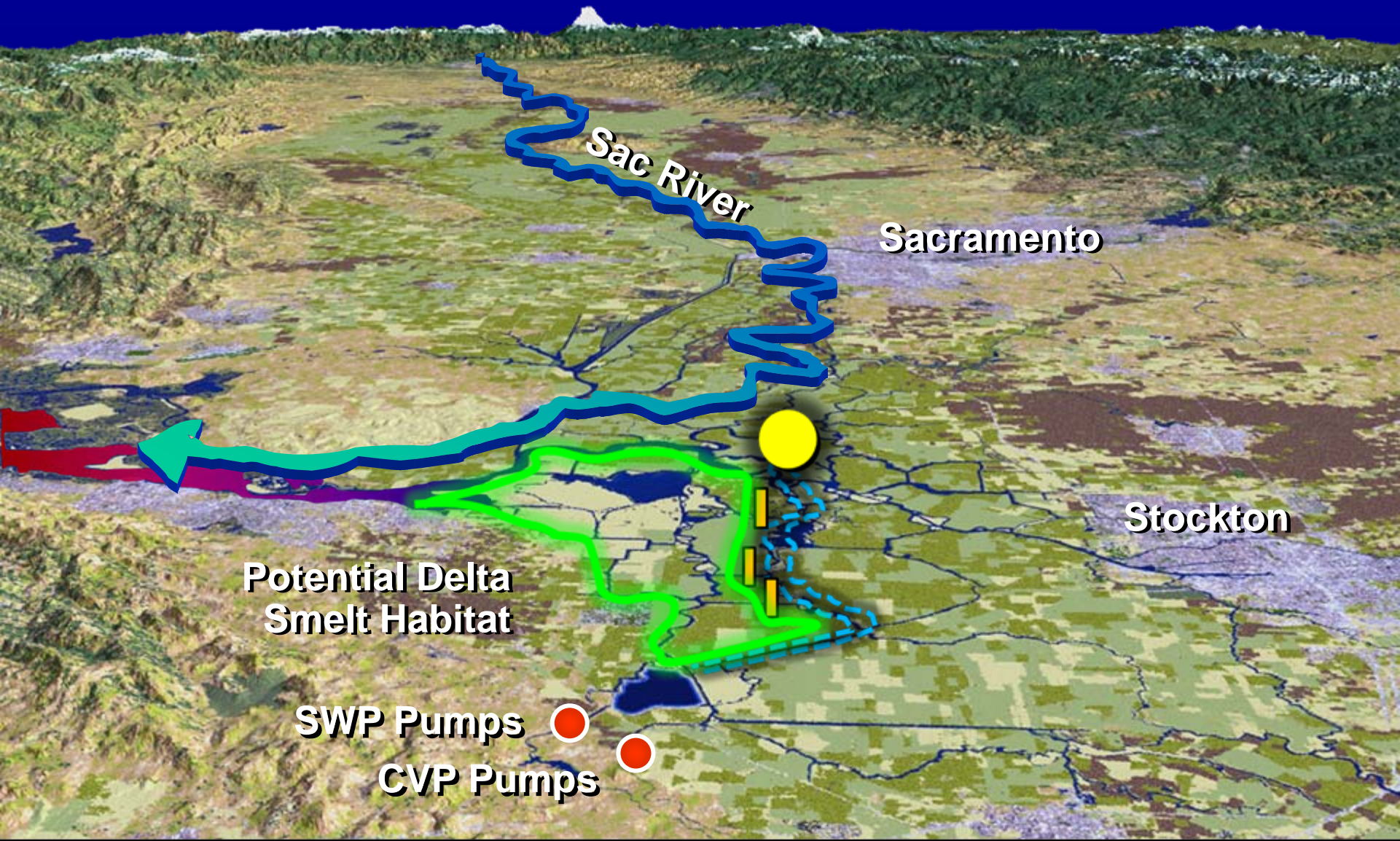


# Emergency Freshwater Pathway Concept



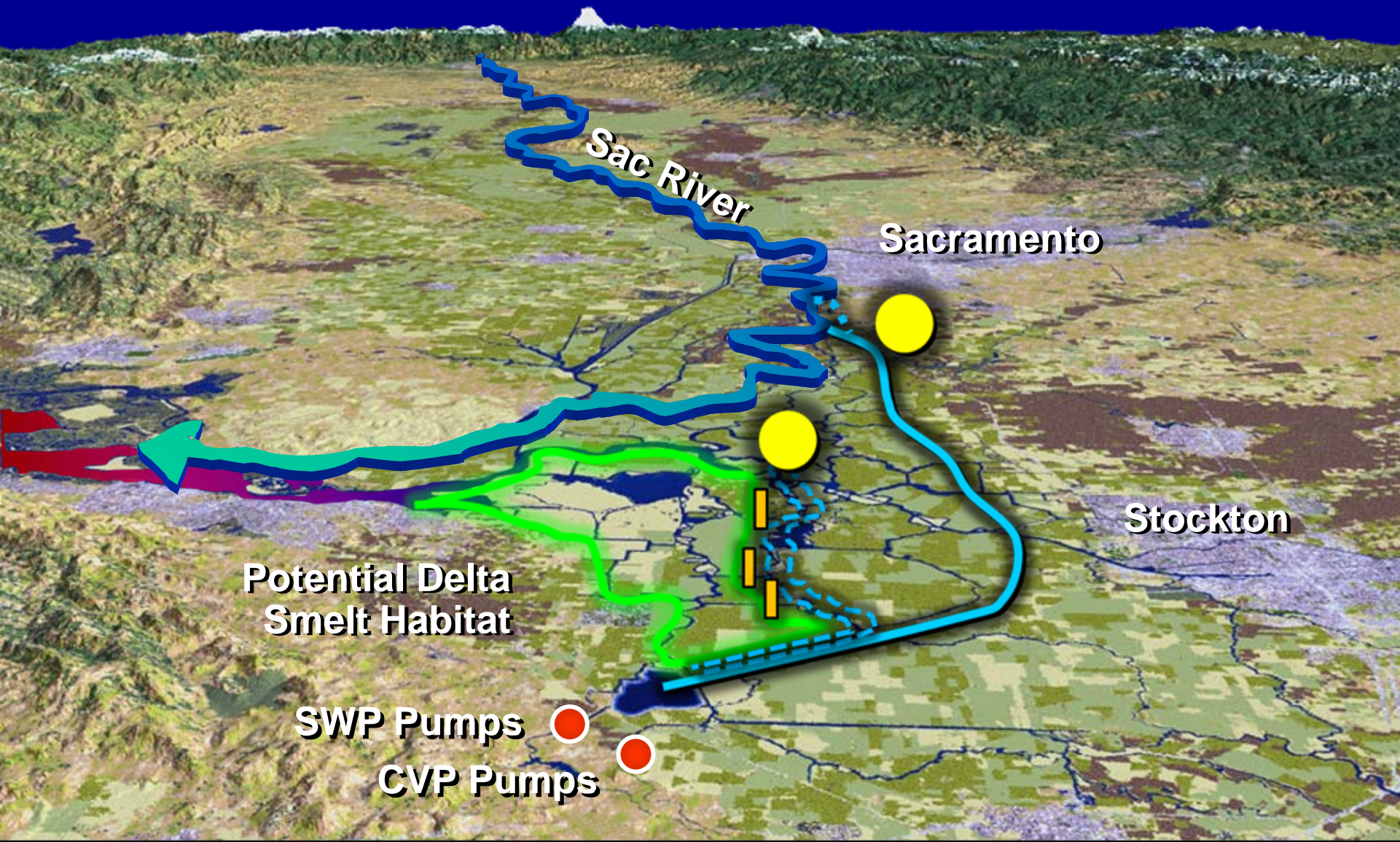


# Eco-crescent / Middle River Conveyance



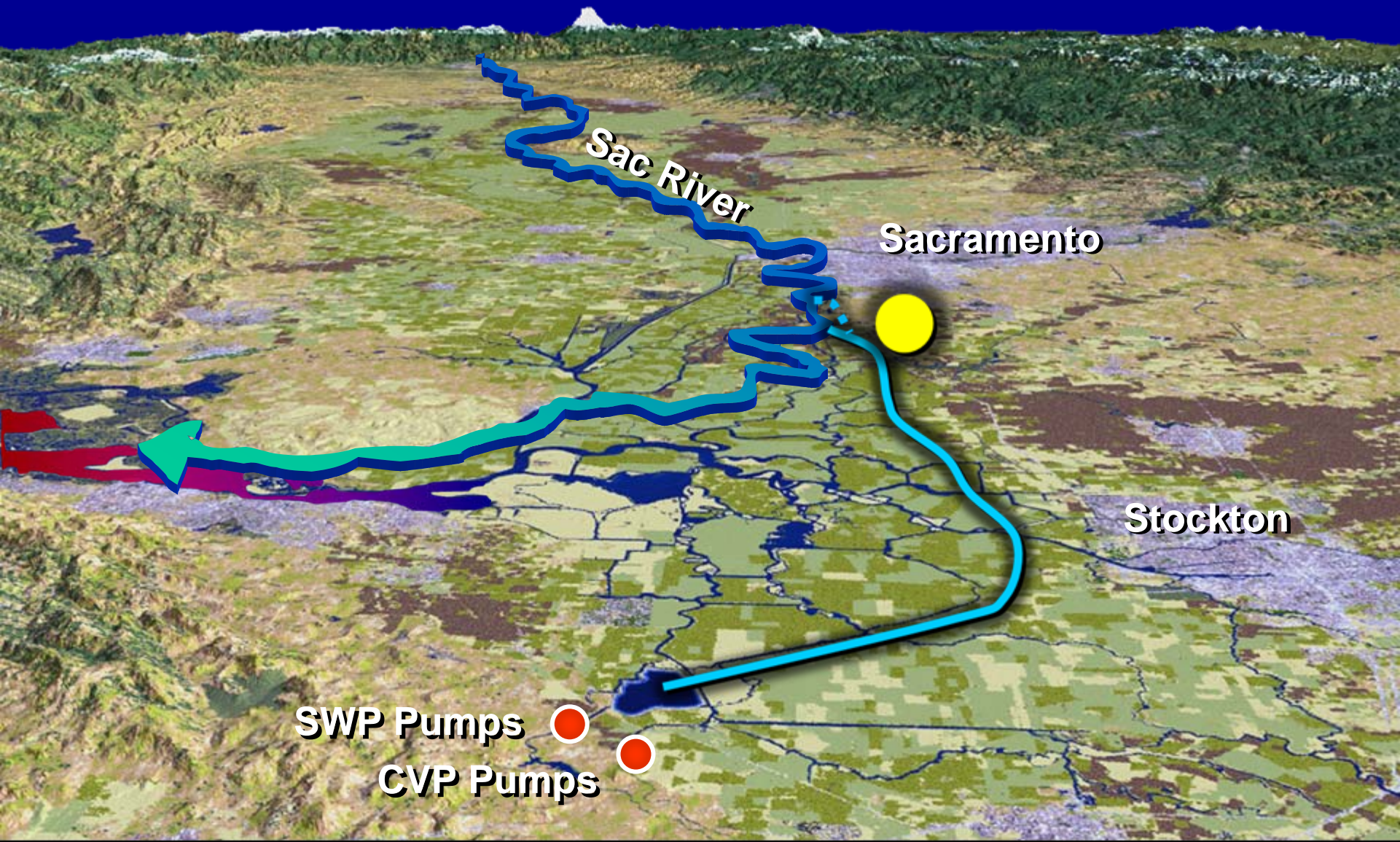


# Dual-Intake Conveyance



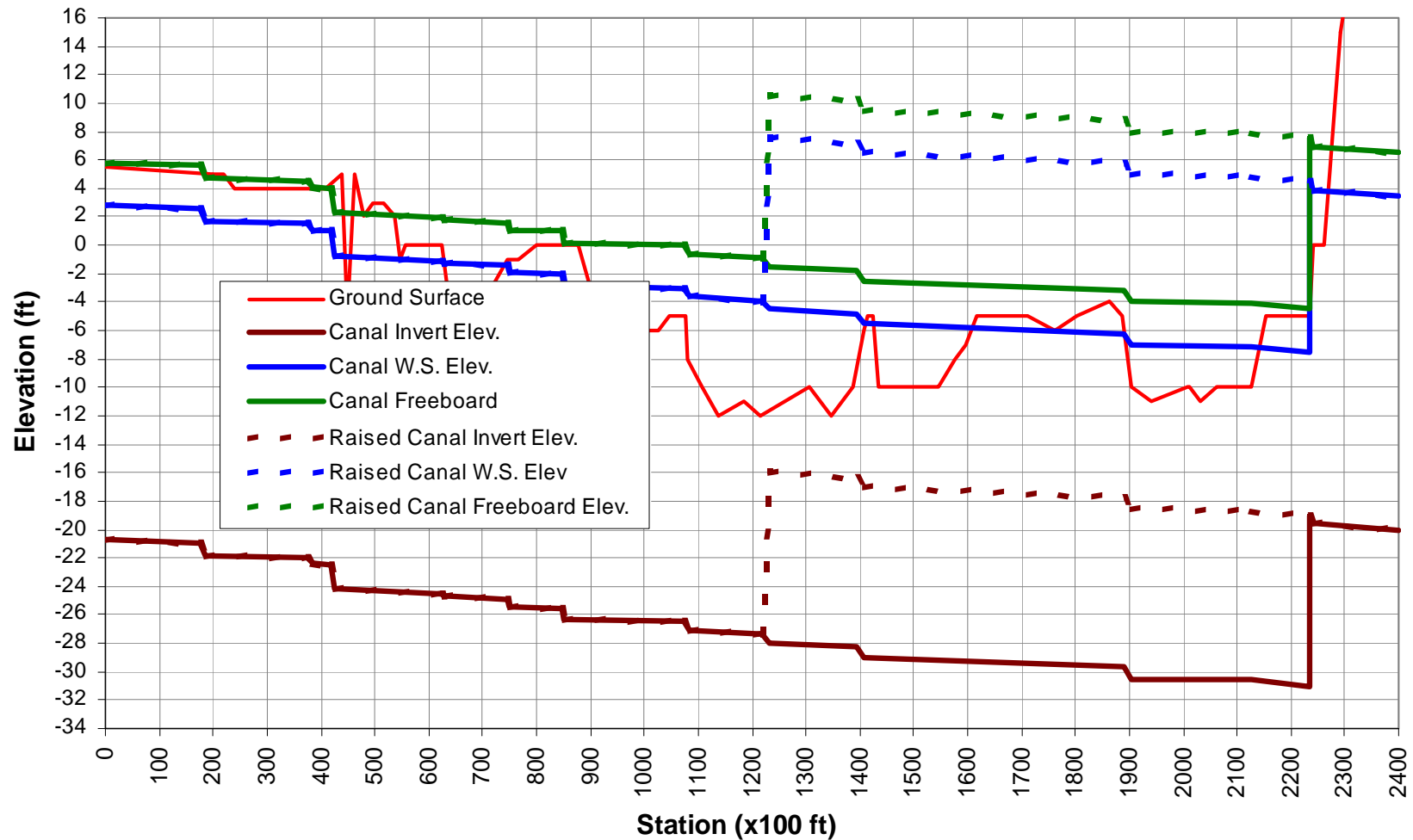


# Fully Isolated Conveyance





# Incised and Raised Canal Profiles

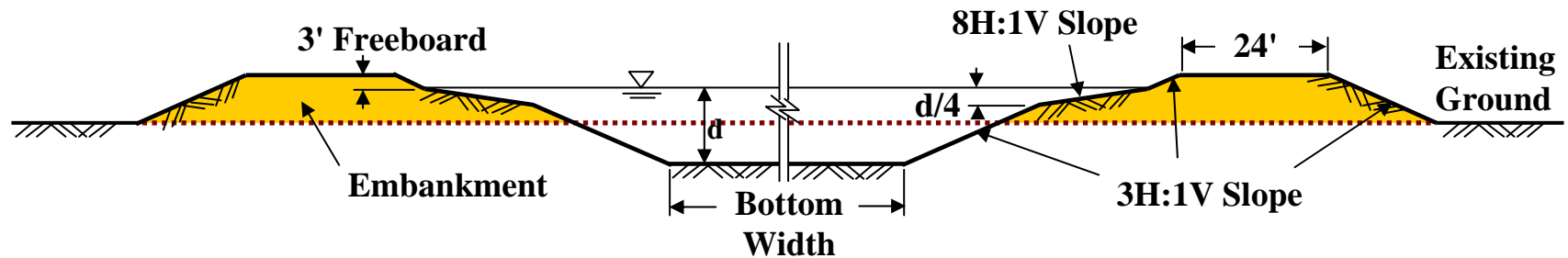


Note: Total canal length is 244,800ft (46.4 miles)



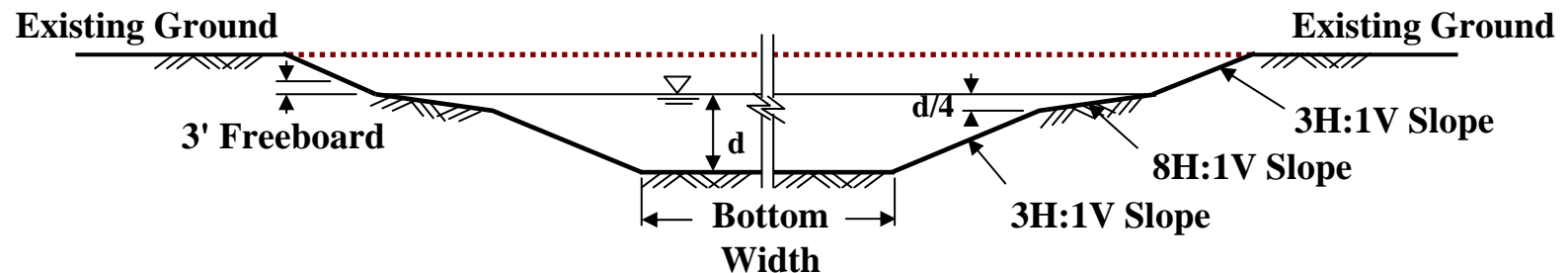
# Typical Canal Cross Sections

## (North of San Joaquin River)



Typical Canal Section with Fill Embankment

Not to Scale



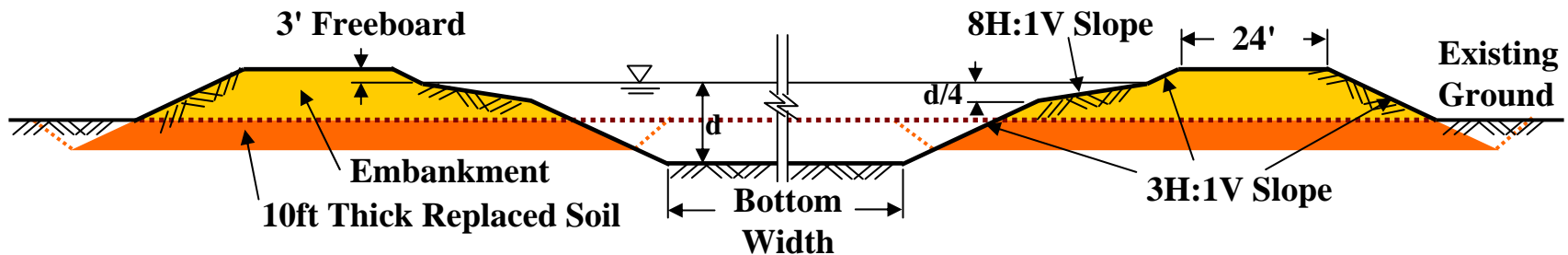
Typical Canal Section with No Fill Embankment

Not to Scale



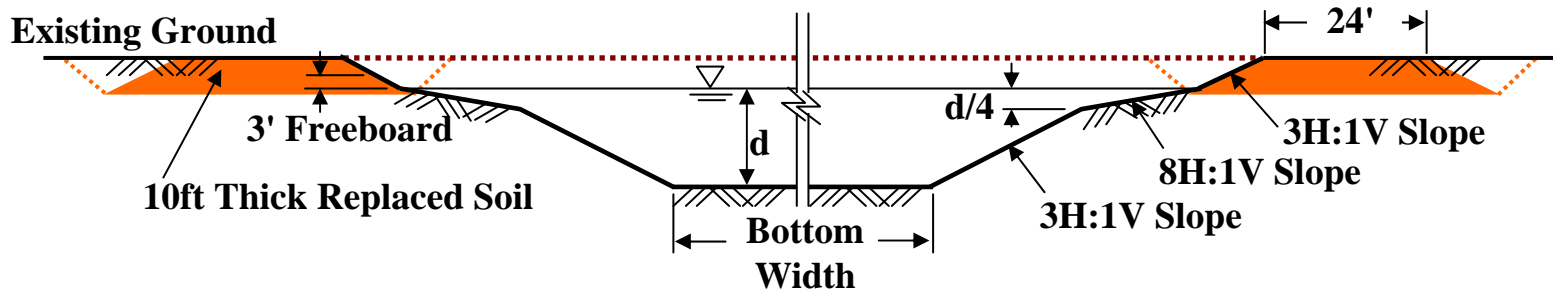
# Typical Canal Cross Sections

## (South of San Joaquin River)



Typical Canal Section with Fill Embankment

Not to Scale

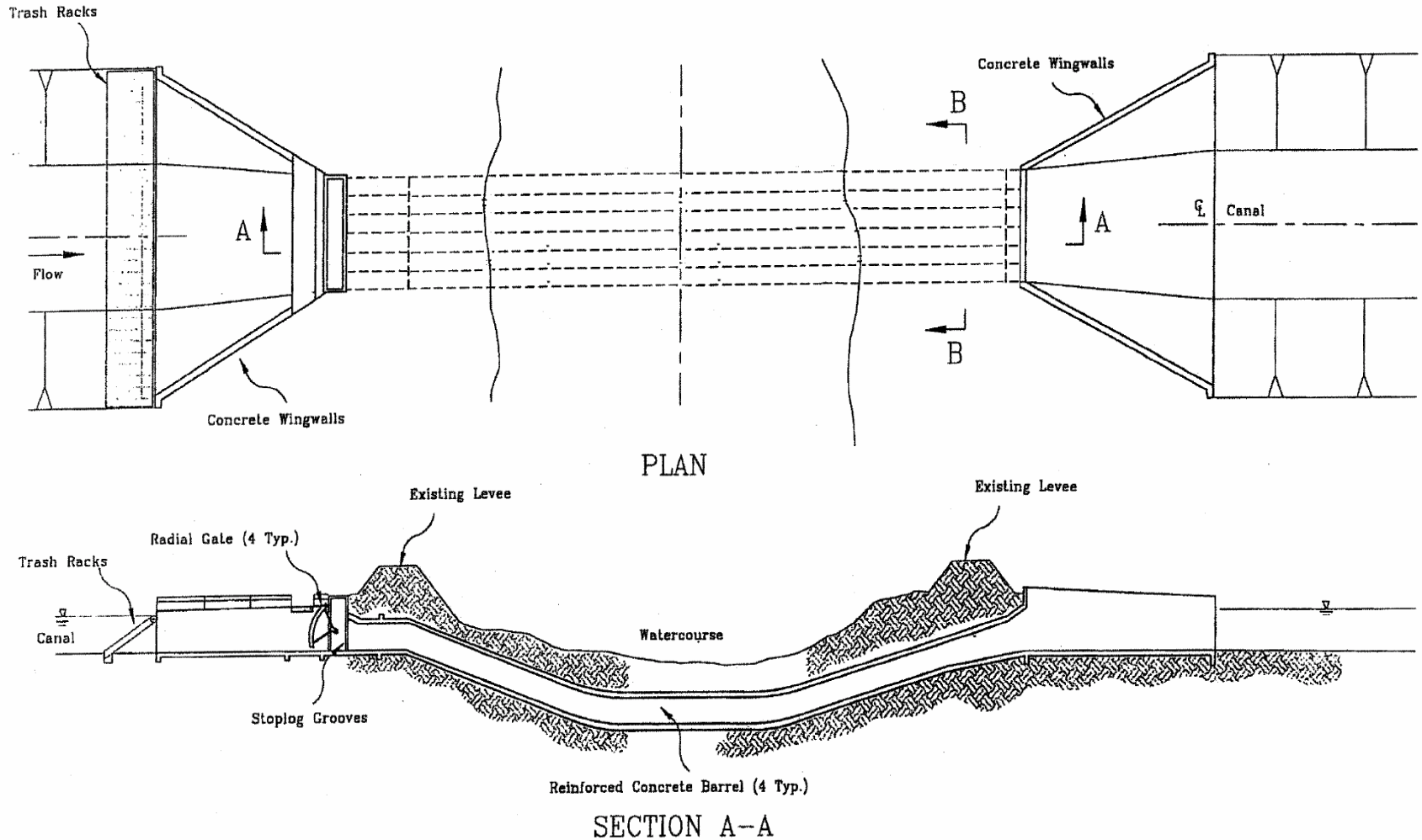


Typical Canal Section with No Fill Embankment

Not to Scale

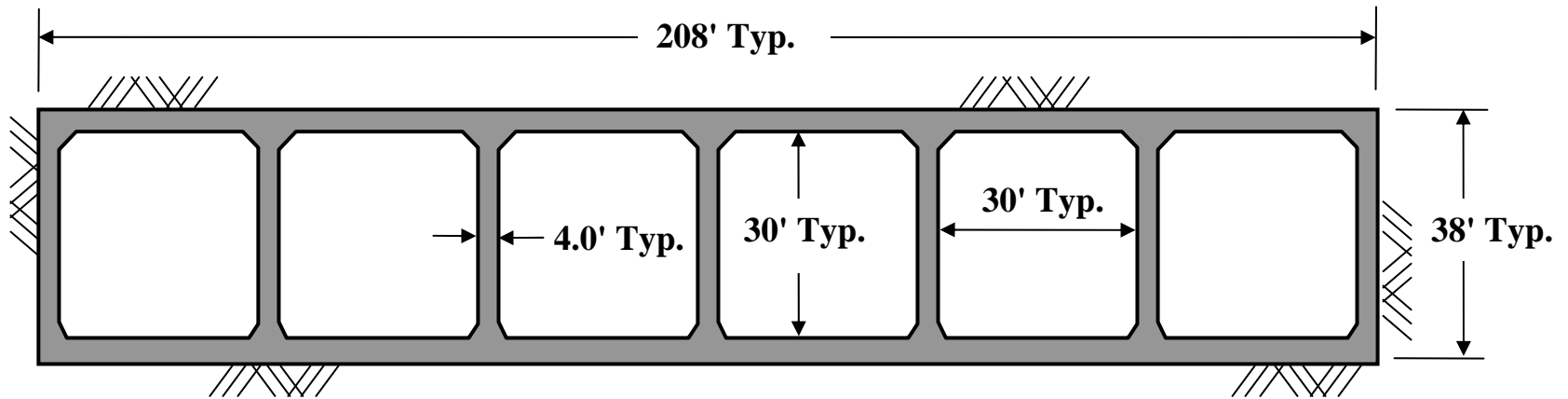


# Typical Siphon Plan & Cross Section





# Typical Siphon Cross Section




**Typical Siphon Section**  
**Not to Scale**

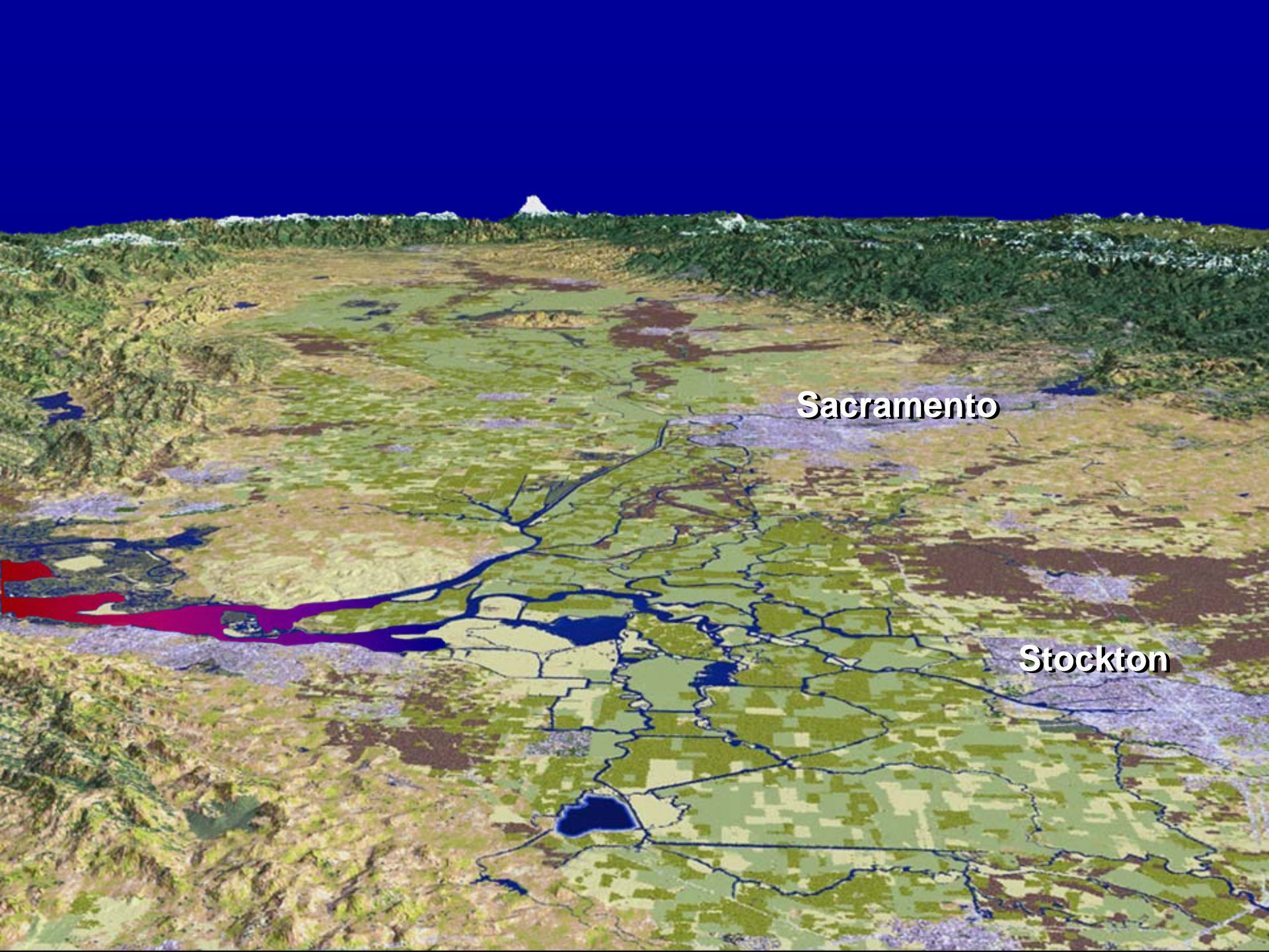


# Operational Considerations

Description	Eco-crescent	Dual-Intake Conveyance	Fully Isolated Conveyance
Diversion Location			
Sizing (cfs)			
Connections			
Future Projects			
Export Ops / Demands			
Delta / Suisun Standards			
Contractual Obligations			
Delta Geometry			
Fish Screen Type			







Sacramento

Stockton